Claims 1 to 3, 9 to 29, 31 to 33, 36 and 37 were rejected under 35 U.S.C. §103(a) over Miroslav and Nielsen et al. and claims 4 to 8, 30, 34 and 35 were rejected under 35 U.S.C. §103(a) over Miroslav, Nielsen et al. and Fyvie et al. The Miroslav and Nielsen et al. references are overcome by the attached Declaration establishing the date of the claimed invention prior to April 2, 1999, the U.S. filing date of the Nielsen et al. reference and prior to the October 1, 1999 U.S. filing date of the Miroslav reference.

The Declaration demonstrates conception and reduction to practice in the United States of the invention described as follows:

> A method for the determination of polymer molecular weight comprises injecting a known volume of an analytical sample comprising a polymer into a flow analysis system comprising a chromatographic column, a concentration detector, and a molar mass detector; effecting a minimally dispersive separation of the analytical sample with the chromatographic column to yield a high molecular weight fraction; determining the polymer concentration in the high molecular weight fraction using the concentration detector; determining the molar mass in the high molecular weight fraction using the molar mass detector; and deriving an average molecular weight from the polymer concentration and the molar mass; wherein the total analysis time is not greater than about 5 minutes per sample (claim 1).
>
> A method for the determination of polymer molecular weight comprises providing a sample array comprising a plurality of spatially differentiated sites, each site comprising a polymer resin; preparing an analytical sample for each spatially differentiated site by dissolving the polymer resin in a suitable solvent; injecting a known amount of each analytical sample into a flow analysis system comprising a chromatographic column, a concentration detector, and a molar mass detector; effecting a minimally dispersive separation of each analytical sample with the chromatographic column to yield a high molecular weight fraction substantially free of monomers; determining the polymer concentration in the high molecular weight fraction of each analytical sample using the concentration detector; determining the molar mass in the high molecular weight fraction of each analytical sample using the molar mass detector; and deriving an average molecular weight for each analytical sample based on the polymer concentration and the molar mass; wherein the total analysis time is not greater than about 5 minutes per sample (claim 28).
>
> A method for the determination of polycarbonate molecular weight comprises injecting a known amount of an analytical sample comprising a polycarbonate resin into a flow analysis system comprising a chromatographic column, a concentration detector, and a molar mass

detector; effecting a minimally dispersive separation of the analytical sample with the chromatographic column to yield a high molecular weight fraction substantially free of monomers and catalysts, wherein the high molecular weight fraction has a peak width at half height less than about 5 seconds at least one of the molar mass detector or the concentration detector; determining the polycarbonate concentration in the high molecular weight fraction using a differential refractive index detector; determining the molar mass in the high molecular weight fraction using a light scattering detector; and deriving an average molecular weight for the polycarbonate resin from the polycarbonate concentration and the molar mass; wherein the total analysis time is not greater than about 40 seconds per sample (claim 30).

A system for the determination of polymer average molecular weight, comprises a solvent delivery system; an autoinjector for injecting a known volume of an analytical sample comprising a polymer; a chromatographic column for effecting a minimally dispersive separation of the analytical sample to yield a high molecular weight fraction substantially free of monomers; an in-line concentration detector for determining the polymer concentration in the high molecular weight fraction; and a molar mass detector for determining the molar mass in the high molecular weight fraction; wherein the system's total analysis time is not greater than about 5 minutes per sample (claim 31).

An analysis system comprises a solvent delivery system; an auto injector for injecting a known volume of each of a plurality of analytical samples comprising a polymer; a chromatographic column for effecting a minimally dispersive separation of each analytical sample to yield a high molecular weight fraction substantially free of monomers; an in-line concentration detector for determining the polymer concentration in the high molecular weight fraction of each sample; a molar mass detector for determining the molar mass in the high molecular weight fraction of each sample; and a computer; wherein the system's total analysis time is not greater than 5 minutes per sample; and wherein computer control of the solvent delivery system, the auto injector, the concentration detector, and the molar mass detector enables analysis of the plurality of analytical samples without human intervention (claim 37).

As a result of invention prior to the filing dates of Nielsen et al. and Miroslav, these references are overcome as prior art. The rejections of claims 1 to 3, 9 to 29, 31 to33, 36 and 37 under 35 U.S.C. §103(a) over Miroslav and Nielsen et al. and claims 4 to 8, 30, 34 and 35 under 35 U.S.C. §103(a) over Miroslav, Nielsen et al. and Fyvie et al. should be withdrawn.

In view of the foregoing amendments and remarks, reconsideration and allowance of claims 1 to 37 are respectfully requested.

Should the Examiner believe that any further action is necessary in order to place this application in condition for allowance, he is requested to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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